



06-01-06

IFW

Express Mail No: EV 544896284 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Zhengming CHEN

Confirmation No: 1403

Application No.: 10/714,066

Group Art Unit: 1626

Filed: November 13, 2003

Examiner: Golam M. Shameem

For: THERAPEUTIC AGENTS USEFUL FOR
TREATING PAIN

Attorney Docket No.: 6750-234-999

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the continuing duty of disclosure imposed by 37 C.F.R. § 1.56 and § 1.97 to inform the Patent and Trademark Office of all references coming to the attention of each individual associated with the filing or prosecution of the subject application, which are or may be material to the patentability of any claim of the application, Attorneys for Applicants hereby direct the Examiner's attention to References A01-A18; B01-B10 and C01-C53 listed on the attached Substitute for Form 1449/PTO entitled "List of References Cited by Applicant."

Copies of References B01-B10 and C01-C53 are submitted herewith. Copies of References A01-A18 are not submitted herewith because they are issued U.S. patents. Pursuant to 37 C.F.R. § 1.98 (a)(2)(i) as amended (see Fed. Reg. vol. 69, no. 182, Sept. 21, 2004), the requirement for providing a copy of each U.S. patent or U.S. patent application publication listed in an Information Disclosure Statement in a patent application, regardless of the filing date of the application, is eliminated.

Identification of the listed references is not meant to be construed as an admission of Applicants or Attorneys for Applicants that such references are available as "prior art" against the subject application.

Applicants respectfully request that the Examiner review all of the references and that the references be made of record in the file history of the application.

This Information Disclosure Statement is being submitted before the mailing date of a first Office Action on the merits; therefore, pursuant to 37 C.F.R. § 1.97(b)(3), no fee is believed due. However, should the Patent and Trademark Office determine otherwise, please charge any required fee to Jones Day Deposit Account No. 50-3013. A duplicate of this sheet is enclosed for accounting purposes.

Respectfully submitted,

Date: May 30, 2006

Samuel B. Abrams 30,605
Samuel B. Abrams (Reg. No.)

By: Michael J. Ryan 41,283
Michael J. Ryan (Reg. No.)

JONES DAY
222 East 41st Street
New York, New York 10017
(212) 326-3939

Attachments



EXPRESS MAIL NO.: EV 544896284 US

Sheet 1 of 5 of List of References

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.
6750-234-999
305158-999232APPLICATION NO.
10/714,066APPLICANT
Chen, ZhengmingFILING DATE
November 13, 2003ART UNIT
1626

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR
	A01	5,606,037	2/25/1997	Attardo et al.	
	A02	5,736,523	4/7/1998	Attardo et al.	
	A03	5,849,737	12/15/1998	Chaplan et al.	
	A04	5,849,761	12/15/1998	Yaksh	
	A05	5,994,372	11/30/1999	Yaksh	
	A06	6,166,039	12/26/2000	Yaksh	
	A07	6,166,085	12/26/2000	Chaplan et al.	
	A08	6,221,888	4/24/2001	Durette et al.	
	A09	6,358,945	3/19/2002	Breitfelder et al.	
	A10	6,362,203	3/26/2002	Mogi et al.	
	A11	6,486,142	11/26/2002	Leblanc et al.	
	A12	6,544,981	4/8/2003	Stein et al.	
	A13	6,573,282	6/3/2003	Yaksh et al.	
	A14	6,576,650	6/10/2003	Yaksh	
	A15	6,586,430	7/1/2003	Armour et al.	
	A16	6,608,052	8/19/2003	Breitfelder et al.	
	A17	6,703,525	3/9/2004	Kapadia et al.	
	A18	6,790,854	9/14/04	Tsushima et al.	

FOREIGN PATENT DOCUMENTS

		FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN)	DATE	NAME	PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR
	B01	WO 97/24325	7/10/1997	Kato et al.	
	B02	WO 99/45011	9/10/1999	Luyten et al.	

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

NYJD: 1608630.1

LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. 6750-234-999 305158-999232	APPLICATION NO. 10/714,066
	APPLICANT Chen, Zhengming	
	FILING DATE November 13, 2003	ART UNIT 1626

FOREIGN PATENT DOCUMENTS

		FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN)	DATE	NAME	PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR	
	B03	WO 00/39125	7/6/2000	Armour et al.		
	B04	WO 01/39775	6/7/2001	Kyle et al.		
	B05	WO 02/38185	5/6/2002	Dunn et al.		
	B06	EP 1219294	7/3/2002	Kato et al. (based on WO 01/021169 published 3/29/01 in Japanese)		
	B07	EP 1277737	1/22/2003	Tsushima et al.		
	B08	EP 1325912	7/9/2003	Okada et al.		
	B09	EP 1097924	5/9/2001	Mogi et al.		
	B10	CA 949560	6/18/1974	Carron et al.		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials		(Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.)	
	C01	Ankier, "New hot plate tests to quantify antinociceptive and narcotic antagonist activities", Eur. J. Pharmacol. <u>27</u> :1-4 (1974)	
	C02	Bernton et al., "Release of multiple hormones by a direct action of interleukin-1 on pituitary cells", Science <u>238</u> :519-521 (1987)	
	C03	Bristow et al., "L-745,870, a subtype selective dopamine D ₄ receptor antagonist, does not exhibit a neuroleptic-like profile in rodent behavioral tests", J. Pharmacol. Exp. Ther. <u>283</u> :1256-1263 (1997)	
	C04	Chen et al., "Molecular cloning and functional expression of a μ -opioid receptor from rat brain" Mol. Pharmacol. <u>44</u> :8-12 (1993)	
	C05	Cheng and Prusoff, "Relationship between the inhibition constant (K _i) and the concentration of inhibitor which causes 50 per cent inhibition (I ₅₀) of an enzymatic reaction", Biochem. Pharmacol. <u>22</u> :3099-3108 (1973)	
	C06	Childers, "Opiate-inhibited adenylate cyclase in rat brain membranes depleted of G _s -stimulated adenylate cyclase", J. Neurochem. <u>50</u> :543-553 (1988)	
	C07	D'Amour and Smith, "A method for determining loss of pain sensation", J. Pharmacol. Exp. Ther. <u>72</u> :74-79 (1941)	
	C08	Duggan and North, "Electrophysiology of opioids", Pharmacol. Rev. <u>35</u> :219-281 (1983)	
	C09	Evans et al., "Cloning of a delta opioid receptor by functional expression", Science <u>258</u> (5090):1952-1955 (1992)	
	C10	Ficker et al., "Molecular determinants of dofetilide block of HERG K ⁺ channels", Circ. Res. <u>82</u> :386-395 (1998)	

EXAMINER	DATE CONSIDERED
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. 6750-234-999 305158-999232	APPLICATION NO. 10/714,066
	APPLICANT Chen, Zhengming	
	FILING DATE November 13, 2003	ART UNIT 1626

NON PATENT LITERATURE DOCUMENTS

Examiner Initials		(Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.)
	C11	Fields and Basbaum, in: <u>Textbook of Pain</u> , Wall and Melzack, eds., Churchill Livingstone, Edinburgh pp. 309-343, (1999)
	C12	Green, "Comparative effects of analgesics on pain threshold, respiratory frequency and gastrointestinal propulsion", Br. J. Pharmacol. <u>14</u> :26-34 (1959)
	C13	Grupp et al., "Protection against hypoxia-reoxygenation in the absence of poly (ADP-ribose) synthetase in isolated working hearts", J. Mol. Cell Cardiol. <u>31</u> :297-303 (1999)
	C14	Hamill et al., "Improved patch-clamp techniques for high-resolution current recording from cells and cell-free membrane patches", Pflugers Arch. <u>391</u> :85-100 (1981)
	C15	Harrison et al., "Conversion of carboxamides and oximes to nitriles or imidoyl chlorides using a polymer-supported phosphine and carbon tetrachloride" Synthesis, pp. 41-43 (1997)
	C16	Hassan et al., "Inflammation of the rat paw enhances axonal transport of opioid receptors in the sciatic nerve and increases their density in the inflamed tissue", Neuroscience <u>55</u> (1):185-195 (1993)
	C17	Heddle et al., "Micronuclei as an index of cytogenetic damage: past, present, and future", Environ. Mol. Mutagen. <u>18</u> :277-291 (1991)
	C18	Ingram and Williams, "Opioid inhibition of I _h via adenylyl cyclase", Neuron <u>13</u> :179-186 (1994)
	C19	Jenkins et al., "Substituent variation in azabicyclic triazole- and tetrazole-based muscarinic receptor ligands", J. Med. Chem. <u>35</u> :2392-2406 (1992)
	C20	Ji et al., "Expression of μ -, δ -, and κ -opioid receptor-like immunoreactivities in rat dorsal root ganglia after carrageenan-induced inflammation", J. Neurosci. <u>15</u> :8156-8166 (1995)
	C21	Kieffer et al., "The δ -opioid receptor: isolation of a cDNA by expression cloning and pharmacological characterization", Proc. Natl. Acad. Sci. USA <u>89</u> :12048-12052 (1992). Erratum in: Proc. Natl. Acad. Sci. USA <u>91</u> :1193 (1994)
	C22	Kieffer and Gaveriaux-Ruff, "Exploring the opioid system by gene knockout", Prog. Neurobiol. <u>66</u> :285-306 (2002)
	C23	Kiehn et al., "Molecular physiology and pharmacology of HERG. Single-channel currents and block by dofetilide", Circulation <u>94</u> :2572-2579 (1996)
	C24	Kong et al., "Agonists and antagonists bind to different domains of the cloned κ opioid receptor", Proc. Natl. Acad. Sci. USA <u>91</u> :8042-8046 (1994)
	C25	LeCluyse, "Human hepatocyte culture systems for the in vitro evaluation of cytochrome P450 expression and regulation", Eur. J. Pharm. Sci. <u>13</u> :343-368 (2001)
	C26	Maron and Ames, "Revised methods for the Salmonella mutagenicity test", Mutat. Res. <u>113</u> :173-215 (1983)
	C27	Meng et al., "Cloning and pharmacological characterization of a rat κ opioid receptor", Proc. Natl. Acad. Sci. USA <u>90</u> :9954-9958 (1993)
	C28	Minami et al., "Cloning and expression of a cDNA for the rat κ -opioid receptor", FEBS Lett. <u>329</u> (3):291-295 (1993)

EXAMINER	DATE CONSIDERED
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. 6750-234-999 305158-999232	APPLICATION NO. 10/714,066
	APPLICANT Chen, Zhengming	
	FILING DATE November 13, 2003	ART UNIT 1626

NON PATENT LITERATURE DOCUMENTS

Examiner Initials		(Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.)
	C29	Mohammad et al., "Blockage of the HERG human cardiac K ⁺ channel by the gastrointestinal prokinetic agent cisapride", Am. J. Physiol. 273(5 Pt 2):H2534-H2538 (1997)
	C30	Moser et al., "Comparison of chlordimeform and carbaryl using a functional observational battery", Fundam. Appl. Toxicol. 11:189-206 (1988)
	C31	Mousa et al., "Local upregulation of corticotropin-releasing hormone and interleukin-1 receptors in rats with painful hindlimb inflammation", Eur. J. Pharmacol. 311:221-231 (1996)
	C32	Ohmura et al., "Effects of terfenadine, astemizole and epinastine on electrocardiogram in conscious cynomolgus monkeys", Eur. J. Pharmacol. 378:169-175 (1999)
	C33	Randall and Selitto, "A method for measurement of analgesic activity on inflamed tissue", Arch. Int. Pharmacodynam. 3:409-419 (1957)
	C34	Rasenick and Childers, "Modification of G _s -stimulated adenylate cyclase in brain membranes by low pH pretreatment: correlation with altered guanine nucleotide exchange", J. Neurochem. 53:219-25 (1989)
	C35	Sato et al., "New μ -opioid receptor agonists with phenoxyacetic acid moiety", Chem. Pharm. Bull. 50:292-297 (2002)
	C36	Selley et al., "Modification of G protein-coupled functions by low-pH pretreatment of membranes from NG108-15 cells: increase in opioid agonist efficacy by decreased inactivation of G proteins", Mol. Pharmacol. 44:731-741 (1993)
	C37	Sharp and Linner, "What do we know about the expression of proopiomelanocortin transcripts and related peptides in lymphoid tissue?", Endocrinology 133:1921A-1921B (1993)
	C38	Stein et al., "Unilateral inflammation of the hindpaw in rats as a model of prolonged noxious stimulation: alterations in behavior and nociceptive thresholds", Pharmacol. Biochem. Behav. 31:445-451 (1988)
	C39	Stein et al., "Opioids from immunocytes interact with receptors on sensory nerves to inhibit nociception in inflammation", Proc. Natl. Acad. Sci. USA 87:5935-5939 (1990)
	C40	Stein et al., "Attacking pain at its source: new perspectives on opioids", Nat. Med. 9:1003-1008 (2003)
	C41	Thompson et al., "Cloning and pharmacological characterization of a rat μ opioid receptor", Neuron 11:903-913 (1993)
	C42	Vindrola et al. "Prohormone convertases PC2 and PC3 in rat neutrophils and macrophages. Parallel changes with proenkephalin-derived peptides induced by LPS in vivo", Neuropeptides 27:235-244 (1994)
	C43	Wang et al., " μ opiate receptor: cDNA cloning and expression", Proc. Natl. Acad. Sci. USA 90:10230-10234 (1993)
	C44	Weihe et al., "Co-localization of proenkephalin- and prodynorphin-derived opioid peptides in laminae IV/V spinal neurons revealed in arthritic rats", Neurosci. Lett. 85:187-192 (1988)
	C45	Whiteside et al., "Pharmacological characterisation of a rat model of incisional pain", Br. J. Pharmacol. 141:85-91 (2004). Epub 2003 Nov 3.
	C46	Winger et al., "Drug-reinforced responding: rapid determination of dose-response functions", Drug Alcohol Depend. 24:135-142 (1989)
	C47	Winger et al., "Effects of buprenorphine and other opioid agonists and antagonists on alfentanil- and cocaine-reinforced responding in rhesus monkeys", J. Pharmacol. Exp. Ther. 261:311-317 (1992)

EXAMINER	DATE CONSIDERED
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. 6750-234-999 305158-999232	APPLICATION NO. 10/714,066
	APPLICANT Chen, Zhengming	
	FILING DATE November 13, 2003	ART UNIT 1626

NON PATENT LITERATURE DOCUMENTS

Examiner Initials		(Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.)	
	C48	Wittenberger and Donner, "Dialkyltin oxide mediated addition of trimethylsilyl azide to nitriles. A novel preparation of 5-substituted tetrazols", J. Org. Chem. <u>58</u> :4139-4141 (1993)	
	C49	Woolfe and MacDonald, "The evaluation of the analgesic action of pethidine hydrochloride (Demerol)", J. Pharmacol. Exp. Ther. <u>80</u> :300-307 (1944)	
	C50	Yasuda et al., "Cloning and functional comparison of κ and δ opioid receptors from mouse brain", Proc. Natl. Acad. Sci. USA <u>90</u> :6736-6740 (1993)	
	C51	Zhou et al., "Electrophysiological and pharmacological properties of HERG in a stably transfected human cell line", Biophys. J. <u>72</u> : A225 (1997) (Abstr. No. W-AM-C7)	
	C52	Zhou et al., "Properties of HERG channels stably expressed in HEK 293 cells studied at physiological temperature", Biophys. J. <u>74</u> :230-241 (1998)	
	C53	Zhou et al., "Block of HERG potassium channels by the antihistamine astemizole and its metabolites desmethylastemizole and norastemizole", J. Cardiovasc. Electrophysiol. <u>10</u> :836-843 (1999)	

EXAMINER	DATE CONSIDERED
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

Information Disclosure Statement
Under 37 C.F.R. §§ 1.56 and 1.97

In re application of: CHEN, Zhengming

For: Therapeutic Agents Useful for Treating Pain

Attorney Docket No. 6750-234-999

Serial: No. 10/714,066

Filed: November 13, 2003

Reference: B01-B10; C01-C53

Binder: 1 of 3

BEST AVAILABLE COPY

Information Disclosure Statement
Under 37 C.F.R. §§ 1.56 and 1.97

In re application of: CHEN, Zhengming

For: Therapeutic Agents Useful for Treating Pain

Attorney Docket No. 6750-234-999

Serial: No. 10/714,066

Filed: November 13, 2003

Reference: B01-B10; C01-C53

Binder 3 of 3

BEST AVAILABLE COPY

Information Disclosure Statement
Under 37 C.F.R. §§ 1.56 and 1.97

In re application of: CHEN, Zhengming

For: Therapeutic Agents Useful for Treating Pain

Attorney Docket No.: 6750-234-999

Serial: No. 10/714,066

Filed: November 13, 2003

Reference: B01-B10; C01-C53

Binder: 2 of 3

BEST AVAILABLE COPY